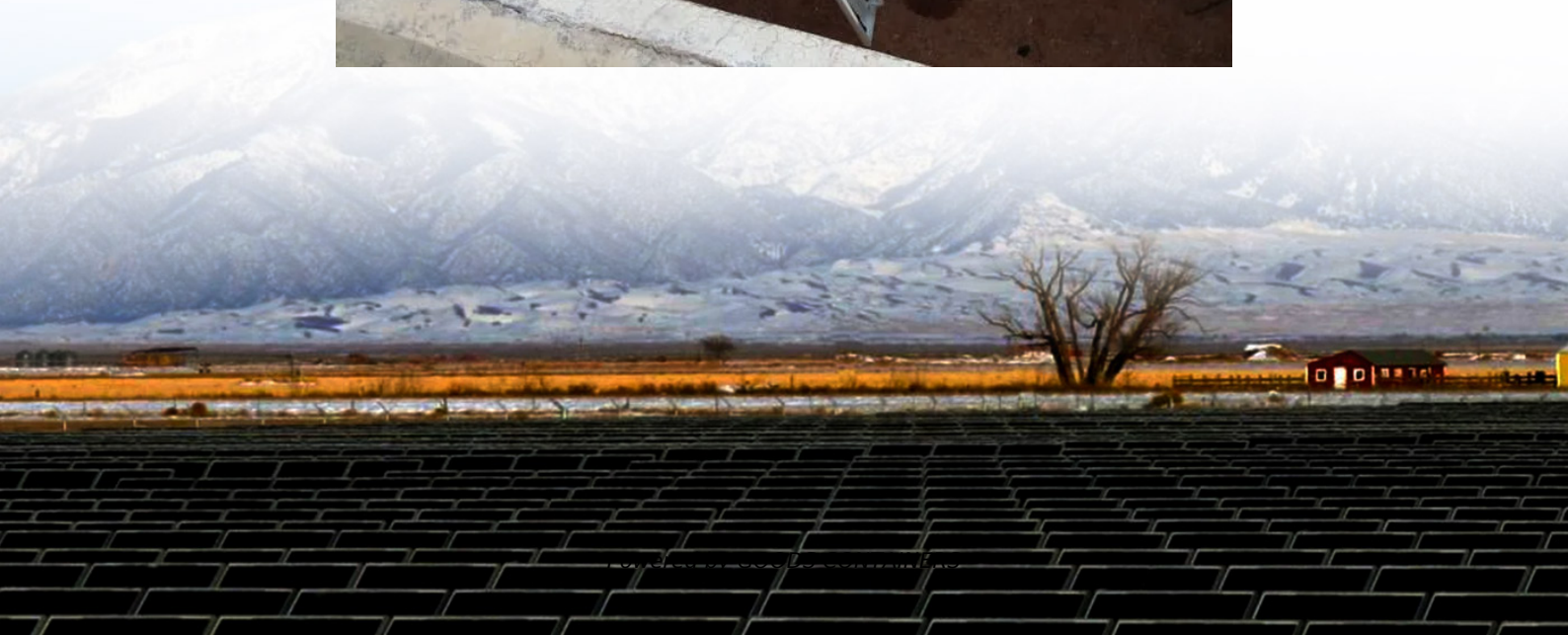


Service life of solar energy storage equipment





Overview

Commercial energy storage systems generally operate efficiently for ten to fifteen years depending on usage conditions and maintenance practices. How long do solar batteries last?

The life expectancy of a solar battery depends on several factors—what kind of battery you have, how you use it, where it's stored, and how well it's maintained. While lead-acid batteries may only last a few years, lithium options can easily reach 10 to 15 years or more with proper care.

Do energy storage products need periodic maintenance?

The requirements for periodic maintenance for energy storage products should be identified by the OEM (IEEE 2010). In settings where predictive analytics maintenance is economical, guidance should also be available from the manufacturer that identifies methodologies for assessing when a product may be approaching a failure mode.

What should NREL consider when testing energy storage systems?

Photo by Owen Roberts, NREL Considerations for energy storage system testing include the following. If cost-justified by a large purchase, consider qualification testing of battery systems. Include test conditions in specifications for battery O&M diagnostics and testing.

How much does a solar energy storage system cost on Alcatraz Island?

The National Park Service budgets, ideally, \$100,000 per year for O&M of this PV energy storage system (308 kW PV; 1,920 kWh battery) on Alcatraz Island. Photo by Andy Walker, NREL Figure 13 shows the PV energy storage system on Alcatraz Island.



Service life of solar energy storage equipment



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